



Public Comment Period

U.S. EPA will accept written comments on the Proposed Plan and Feasibility Study during a public comment period:

Date: November 13 to
December 13, 1996

Public Meeting

U.S. EPA will hold a public meeting to explain the Proposed Plan and all alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting:

Date: November 21, 1996

Time: 7:00 to 9:00 p.m.

Place: Kent State-Ashtabula Campus
Blue and Gold Room
3325 West 13th Street
Ashtabula, OH

Questions and Answers: Fields Brook Superfund Site Information Availability Session and Public Meeting, September 26, 1996

November 1996

Ashtabula, Ohio

*The following is a response to questions received at the Fields Brook Site information availability session and public meeting held on September 26, 1996, at 7 p.m. in the Kent State-Ashtabula Campus Auditorium in Ashtabula, Ohio. The questions are first listed in **bold print** with a response immediately following; related questions are grouped together.*

1. Why has it taken so long for EPA to clean up this Site; why hasn't the Brook been cleaned a long time ago? Contamination releases have occurred back to 1960.

There are several reasons for the time the work has taken at the Site. The Fields Brook Site is a large, six square mile, "multiple source" Site, which has created difficulties in studying the problem and in determining what cleanup actions are required.

As discussed at the meeting, regulations to address sediment cleanup did not exist back in the 1960's. The EPA came into existence as a federal agency in 1970, and the Superfund program began in 1980. Although the 1986 "Record of Decision" (ROD) document which EPA signed identifies that the Brook sediments must be removed and treated, the ROD noted that source areas of contamination must also be identified and remedied if necessary. In addition, the Floodplains/Wetlands Areas (FWA) also needs to be addressed where necessary, and the studies over this large area have required that a number of phased sampling events of the soils, plants, and animals in the FWA occur. EPA will also soon be recommending that cleanup actions occur on approximately twenty areas which are potential sources of recontamination to the Brook sediment; these areas are on six separate industrial properties. The multiple phases of required fieldwork needed to properly define the extent of contamination in the FWA, Brook sediments, and on source properties have in part caused the lengthy process required to get to cleanup. It is also recommended that cleanup of the source control and FWA occur prior to or at the same time as cleanup of the Brook sediments, so that the Brook would not be recontaminated after the Brook is cleaned.

Regarding the Brook sediment remedy, the project requires a technically complex design which by its nature requires careful engineering. It is a challenging engineering project to remedy wet sediments under a flowing Brook. Also, Superfund enforcement requirements require that, on a Site-specific basis, that the potentially responsible parties (PRPs), if identified, conduct the work at the Site. EPA negotiated with the PRPs between 1986-1989 to achieve settlement for the work to be performed. Lastly, the extensive and complex work at the Site has required lengthy documents to be produced by the PRPs and reviewed and accepted by the agencies.

2. When will the Proposed Plan be released for the FWA?

The Proposed Plan was mailed to those on the Fields Brook site mailing list on November 12, 1996. It is also available for public review at the information repositories for the Fields Brook Site. EPA will hold a public meeting on November 21, 1996 at 7:00 p.m. in the Kent State-Ashtabula Campus Blue and Gold Room located at 3325 West 13th Street in Ashtabula, OH. At this public meeting EPA will explain the Proposed Plan and all alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting.

3. Regarding the schedule, will cleanup activities begin in spring 1998 on the FWA and at the Fields Brook Site?

This is the current schedule, and cleanup activities are planned to occur in 1998 barring unexpected delays.

4. What is Ohio EPA's involvement at the Site?

OEPA has been involved in technical document reviews, in providing comments to the various reports, participation in meetings which discuss and finalize the reports with the PRPs and participation at public meetings. OEPA staff have also assisted by helping to set cleanup discharge standards for wastewater which may be generated during cleanup actions and in generating technical comments. Further, OEPA staff have assisted in conducting oversight of field activities which have occurred during the investigations. The State of Ohio is also a trustee for natural resources at the Site.

5. What steps are required to do a Superfund cleanup?

The normal process for a Superfund remedial Site cleanup is as follows:

1) The Site is listed on EPA's National Priorities List (NPL) of Superfund Sites; this occurred for the Fields Brook Site in 1983.

2) EPA may try to identify PRPs for the Site and have them begin investigations at the Site. In the alternative, EPA conducts the remedial investigation. The purpose of the remedial investigation is to determine the nature and extent of the contamination at the site. After the investigations are complete, a Risk Assessment is conducted to determine whether there is unacceptable risk to humans or the environment due to exposure to the contamination at the Site. If an unacceptable risk is identified, then a Feasibility Study is prepared to develop preliminary remedial goals and potential remedies to address the contamination and provide for protection of human health and the environment. For the Fields Brook sediments, this occurred between 1983 and 1986. For the FWA and source control areas, this occurred between 1989 and 1996.

3) EPA issues a "Proposed Plan" for public review and comment. The Proposed Plan identifies EPA's proposed cleanup remedy for the Site or portions of the Site. For the Fields Brook sediments, this occurred in 1986; for the FWA this is planned to occur in November 1996.

4) EPA issues a "Record of Decision" (ROD), which documents the formal remedy selected by EPA to be conducted at the Site or Site areas. For the Fields Brook sediments, this occurred in September 1986; for the FWA this is planned to occur in December 1996.

5) EPA normally begins a 60 to 120 day period of settlement negotiations with PRPs to try and have the PRPs design and conduct the remedy. These settlement negotiations may be longer if, for example, the Site is unusually complex. For the Fields Brook sediments, initial negotiations occurred between September 1986 and March 1989 and resulted in settlement to conduct the Brook remedial design and source control area RI/FS activities. The FWA design and cleanup and Brook sediment cleanup settlement negotiations are planned to occur approximately between January 1997 and June 1997.

6) After the ROD is signed and it is settled who will conduct the work, the remedy is designed and constructed. Cleanup generally begins once the design is completed. If a settlement occurs, then the PRPs would conduct the cleanup. If settlement discussions fail, then EPA may use the Superfund to conduct the cleanup if funds are available. If the Superfund is needed to be used for a remedial cleanup, the State would need be involved in the proposed cleanup action.

7) The EPA would oversee the entire process and help ensure that the remedy is constructed safely.

8) Operation and maintenance of the remedy may be needed after construction, and reports are prepared of this activity to help ensure the remedy remains protective. If contaminants are left in place at the Site not allowing for unrestricted use of the Site and unlimited exposure, then EPA will also conduct a separate "Five Year Review" which would assess whether the remedy remains protective of human health and the environment; if this review indicates that the remedy is no longer protective for any reason, then alternatives are developed to fix the remedy.

9) EPA does have the authority to conduct what is known in Superfund as a "Removal Action" under certain circumstances. This general approach may be occurring for each of the source control properties at the Site which appear to need cleanup actions to prevent recontamination to the Brook. Proposed cleanup actions for the source areas may be discussed at public meetings in November or December.

6. Does EPA know who is liable for the contamination? Will the companies respon-

sible for the contamination be paying for the entire cleanup? Have we started getting money from PRPs? Is there a settlement yet with the PRP's? Will the PRP's pay EPA back for money the government spent to do the cleanup? Has EPA put any pressure on PRP's to do cleanup work in the Brook, FWA and River?

EPA has identified Potentially Responsible Parties (PRPs) for the Fields Brook Site. The PRPs are comprised mostly of companies who are considered owners and operators of the chemical industries and waste disposal Sites surrounding Fields Brook. These companies owned or operated the industries at the time that any disposal of hazardous substances may have occurred. The PRPs also include the companies who, by contract, agreement, or other means, either accepted, or arranged for transport, disposal or treatment of, hazardous substances within the Fields Brook Site.

A group of the PRPs (Fields Brook Action Group) has already conducted a significant amount of investigation and design-related work at the Site which must be conducted prior to the beginning of construction activities. The remedial design for the excavation, treatment and disposal of Brook sediment and the RI/FS of contaminant sources is being carried out by approximately fifteen of the identified Fields Brook PRPs under a Unilateral Administrative Order (UAO) issued by EPA on March 22, 1989. The PRPs also voluntarily conducted an RI/FS for the FWA, and have submitted an RI/FS as well as an Integrated Human and Ecological Baseline Risk Assessment for the FWA. The investigation of the Ashtabula River was conducted by five PRPs under a Consent Order issued by EPA on September 26, 1989. These settlement agreements are available for review in the Site's information repositories.

The PRPs have not yet signed agreements and settlement documents for conducting the cleanup construction activities for the FWA, Brook sediments, and source areas of contamination. EPA anticipates that these settlement agreements with the PRPs responsible for these areas of contamination will be signed within the next year. EPA and OEPA will oversee the activities of the PRPs. These settlement agreements or a separate agreement would include agreements for the PRPs to pay back the government for its past costs and/or future oversight costs.

When PRPs elect to conduct the cleanup activities at a Superfund Site, they must do so in accordance with the terms of the negotiated settlement agreement. Subsequently, PRPs and their agents are responsible for the implementation of cleanup activities specified. During a PRP cleanup, the primary function of EPA and OEPA is to ensure PRPs comply with all applicable laws, regulations,

and requirements, and meet all performance standards specified in the Settlement Agreement. EPA and OEPA have two main objectives for overseeing PRP conducted cleanups: 1) ensure the cleanup activities are protective of public health and the environment throughout the life of the project; and 2) ensure the work is implemented in compliance with the terms of the settlement agreement.

Both field and office oversight is conducted. Field oversight will be conducted by the EPA and possibly by OEPA. EPA generally uses a high level of oversight at the onset of a cleanup, and the amount of oversight effort may be increased or decreased over time depending on the capabilities of the PRPs' design and construction teams, the nature and implementation of the work, and the provisions of the settlement agreement. As the PRPs demonstrate competence in implementing the cleanup activities, the amount of oversight may be decreased.

The Fields Brook Action Group have indicated that they have spent close to \$25 million thus far in actions for the FWA, Ashtabula River studies and compliance with the 1989 Orders.

7. Has EPA informed the industries in the area of the ongoing activities? Have the workers in the industries been informed of the plans, and do they receive fact sheets?

All of the industries which are considered PRPs at the Site (which include in part most of the operating industries near Fields Brook) have been informed of the ongoing activities at the Site. If they joined the PRP group, these companies receive reports of the ongoing activities from the "Fields Brook Action Group" PRP organization. EPA has made available copies of the released reports to the public at the information repository at the Ashtabula County Library in Ashtabula. The workers, along with the rest of the citizens, may review the information available in the administrative record for this Site at that location.

8. Will the Superfund be able to pay for the cleanup if the PRPs do not pay for the cleanup? What is the Superfund budget? How much money is available to do Superfund cleanups? Has Congress reauthorized Superfund?

Currently available information indicates that there would be sufficient Superfund remedial money to pay for the cleanup if the PRPs do not conduct it. The Superfund budget for Fiscal year 1997 is approximately \$1.35 billion for the entire nation. While Congress has not yet reauthorized Superfund (which would replenish the Fund used to support Superfund activities), the Superfund law still exists and has not been withdrawn. EPA currently has the authority to order and conduct Superfund cleanups.

9. How much money will it cost to clean up the Brook, FWA, and sources of contamination to the Brook?

As discussed at the 9/26/96 public meeting, current present worth cost estimates to clean up the Site are as follows: Brook sediments, approximately \$20 million; FWA soils, approximately \$7 million; and Source areas (combined cost), approximately \$15 to \$20 million.

10. How many residents are being affected by the contamination in the Brook?

For there to be a risk there must be a route of exposure from the contaminants to the exposed individual. From a risk standpoint, the primary route of exposure at Fields Brook is by incidental ingestion of sediment and/or soil from the contaminated areas in the Brook or the FWA areas immediately adjacent to the Brook. To a much lesser extent there is a potential risk due to direct contact of the sediments and soils on bare skin. Risk is discussed more fully in the answer to question 2.

Currently, there are approximately 40 residences immediately adjacent to Fields Brook between 16th Street and Route 11 in Ashtabula, located along both sides of the Brook. In addition, there are several homes along the east side of the Brook on top of the hill above the Conrail Facility near the Ashtabula River. Further, there are several apartments and townhouses along the north side of Fields Brook between 16th Street and Route 11. The total number of residents could approach 150 to 200 people living directly next to the Brook. There is evidence that residents living in the vicinity of the Brook also trespass/walk along the Brook and enter the Brook area near the roadway crossings. Also, there are several residents who work in the industrial properties along Fields Brook, who are potentially affected by the contamination in the Brook.

11. Has EPA done a survey on how much cancer has occurred in the area? We have been exposed for 30 years to the Fields Brook contamination, and have had good friends that died of cancer.

As discussed at the 9/26/96 meeting, a cancer survey was conducted by the Ohio Department of Health in June 1987 to assess whether there was any evidence of increased incidence of cancer to residents who live or lived along Fields Brook due to potential exposures to contaminants which have been released from companies along the Brook. This survey has been released to the information repositories for the Fields Brook Site, and indicated that the survey was not able to detect statistically significant increases of cancer to the population within close proximity to Fields Brook when compared to the total cancer levels indicated for the State of Ohio and for the United States. However, within that normal cancer rate, the incidence of brain and central nervous system cancer was

higher than expected compared to both Ohio and the United States levels. The study also noted that it was not known if potential exposures by these individuals to Fields Brook area contamination played a role in these increased incidences. A detailed follow-up investigation into these cases was conducted by the Ohio Department of Health in June 1988 and that report is also included in the information repository.

Due in part to the potential that cancer may occur to residents along Fields Brook due to exposure to contaminants from the FWA and Brook, EPA is proposing that cleanup actions occur to FWA soils, stream sediments, and source properties along the Brook to help provide for protection to human health and the environment.

12. How much of a risk is this Site? Is it safe to walk on the FWA?

There is not likely to be a short term risk to anyone walking along the Brook in the FWA. However, as discussed within EPA's 10/96 Human Health Risk Assessment for the FWA and in EPA's 1985 Risk Assessment which was included in the Remedial Investigation Report for the Fields Brook sediment area, there is a calculable cancer risk to residents, workers, and trespassers due primarily to long-term exposures through ingestion of soils and contaminants in the FWA soils and Brook sediments. As noted in these reports, if no FWA cleanup were to occur and someone was exposed through ingestion of FWA soils or Brook sediments for a number of days per year and for a number of years, there may be approximately one chance in 10,000 that that person would get cancer. However, the cleanups proposed to occur in the FWA soils and Brook sediments would provide for long term protection of human health in the Brook area, and reduce potential cancer risk to approximately one chance in one million after cleanup. In the industrial FWA, the cleanup proposed to occur would also be protective of human health and reduce the potential cancer risk to occupational workers in the area to approximately three chances in one million after cleanup.

13. How will the FWA remedy be protective if up to 29 ppm total PCBs are left in the FWA behind homes and covered with 6" of soil?

The FWA remedy involves excavation of the contaminated soils containing at or above 30 ppm total PCBs in the residential area (with clean soil backfill), and 6 inch clean soil cover over contaminated soils containing between 6-30 ppm total PCBs. EPA has considered the likelihood of direct exposure by people to contaminated soils below the 6 inches of clean soil. EPA believes that the cover activities in the residential area of the FWA combined with the excavation activities will provide a protective remedy. As discussed at the 9/26/96 meeting, EPA feels it is reasonable to assume that exposure of people to soils along the FWA occurs across an area of approximately 2000 feet

lengths of the FWA along each side of the Brook. Exposure of a person to any one location of FWA soils containing 29 ppm total PCBs and covered with six inches of clean soil is averaged with that person's exposure to the clean backfill areas and non contaminated areas of the FWA. Thus the relative risk of exposure has been reduced through the combined excavation and cover cleanup remedy.

EPA investigated several potential ways that contaminants could reach the surface of the six inch soil cover. These include movement to the surface by earthworms, burrowing animals, and by other mechanisms. The PRPs have responded to several of these potential mechanisms in their 8/13/96 Comment Response Report which has been placed in the information repositories for public review. The combination of cover with clean fill in excavation areas will result in approximately a 1 ppm net average concentration of total PCBs exposure; this would be protective.

Another consideration which EPA investigated is the likelihood of regular frequent exposure to the soils. EPA's review of the information regarding exposure to FWA soils indicate that very frequent exposure to FWA soils is not likely. There are six months or more of the year which involve cold weather in Ashtabula, which tends to inhibit outdoor exposure to soils. The FWA does not have any buildings or structures, because of regular flooding, and this may lessen the likelihood of human exposure in the area. Further, the FWA is generally different than the immediate backyard lawn areas of the homes along the Brook. The FWA is topographically lower than the grassy backyard areas (i.e., 10-20 feet lower in height than the lawn areas) and is frequently separated from the backyard lawn areas by brush, bushes with burrs and other obstacles making it difficult to reach the FWA directly from the homes.

EPA also considers it unlikely that a person's total assumed exposure would occur entirely to the soils contaminated at depth below the soil cover. This unlikely scenario would assume that someone would need to ingest between 50 and 200 milligrams of these subsurface soils per day 61 days per year for children, 110 days/year for adolescents and 37 days per year for adults, for a total of thirty years. Even if such exposure occurred at that rate for those years, the calculated cancer risk to that person is approximately three chances in 100,000.

14. Homeowners who do landscaping along the FWA may dig 2 feet deep into the FWA soils; what would be the risks if this occurs on a daily basis?

The PRPs have conducted field investigations within FWA soils all along the Brook. For FWA soils in the residential area, the Proposed Plan for remediation includes excavation of all soil areas with PCB contamination above 30

ppm and hexachlorobenzene (HCB) above 80 ppm to a depth of one foot and backfill the excavated area with clean soils. The Proposed Plan also would cover all soil areas with between 6-30 ppm PCBs in the residential areas with 6 inches of clean soil. After the cleanup is conducted according to these requirements, there should not be any residual contamination left at unhealthful levels which would present a long-term risk even if frequent landscaping activity occurs in the FWA.

Also, of the 23 deep soil samples taken between one-to-two feet from the surface in the FWA, only two samples indicated levels of any contamination above the acceptable Cleanup Goal levels. These two locations are in the FWA soils between Columbus Avenue and East 16th Street. The levels of contamination at these locations are only slightly above the cleanup goal levels and in these two locations the surface soils will be covered with six inches of clean soil.

Also, plants growing in the FWA generally do not pick up organic contamination such as PCBs and HCBs. This is because their roots generally do not absorb these contaminants, according to scientific studies.

15. Homeowners who do gardening along the FWA may dig into the FWA soils, and may eat vegetables which are grown there. What are the risks from these activities?

Plants, including vegetables which are grown in the FWA would generally not pick up organic contamination such as PCBs and HCBs from the soils in the FWA. This is because their roots generally do not absorb these contaminants, according to scientific studies. Leafy vegetables may pick up heavy metals such as cadmium, chromium and mercury which may exist in the FWA; however, these metals are not prevalent in FWA soils at elevated levels. After the FWA cleanup occurs, the elevated areas of soil contamination will be removed from the FWA.

16. Are there chemicals, including PCB's, in the ambient air? Is there a problem from inhalation of these chemicals? Will the construction activities release chemicals into the air?

It is possible that volatile organic contaminants (VOCs) such as methylene chloride, trichloroethylene, and perchloroethylene may have been released into the air in the past at the Site.

As discussed in EPA's October 1996 Human Health Risk Assessment, EPA's review of the Site information indicates that the significant routes of exposure to residents and workers along Fields Brook to Site contaminants are incidental ingestion of soil and dermal absorption of contaminants in soil. Exposures through inhalation of volatilized contaminants and inhalation of contaminants sorbed to airborne particulates were considered in the

evaluation, but relative to chemical intake through ingestion and dermal absorption, the chemical intake for these other exposure routes would be insignificant and toxicologically inconsequential. Volatilized contaminant concentrations would be dilute in open air and the wet nature of the FWA and Brook sediments would preclude significant dust generation. Potential health risks due to inhalation of volatilized contaminants and contaminants sorbed to airborne particulates were not quantitatively evaluated in the Risk Assessment, because these risks were estimated to be unlikely and/or insignificant relative to the quantitatively assessed exposure pathways. The uncertainty associated with the inhalation route evaluation is considered low.

As discussed at the 9/27/96 meeting, there is a possibility that there could be releases during construction activities above acceptable limits which assure protection of human health and the environment. Air monitoring during construction activities in the FWA and Brook sediment areas will be conducted to help assure that no unacceptable levels of air contaminants are released during the cleanup. Air samples will be taken and analyzed at an approved laboratory; the EPA and OEPA will review the results of this sampling. The levels will be compared to short-term industry standards to ensure protectiveness, as well as to long-term calculated levels. If any unacceptable releases are found, cleanup activities would immediately be adjusted to prevent unacceptable releases of air contaminants.

Occupational exposure air limits will be met on-site during the cleanup activities. These limits are established by OSHA (Occupational Safety and Health Administration), ACGIH (American Conference of Governmental Industrial Hygienists), and NIOSH (National Institute for Occupational Safety and Health) for the protection of healthy adult on-site workers subject to Site emissions over a limited period of time. The EPA and State of Ohio air regulations also have regulatory limits for the emissions of volatile organic contaminants (VOCs) and particulates. These regulatory limits are set and based on long-term, health-protective levels. VOC and particulate emissions will be monitored, and will be reviewed by EPA and OEPA, to assure compliance with these regulations.

The companies doing the cleanup work will collect the samples and monitor the actual operation. Government oversight will be conducted to help assure that the cleanup is operated safely and according to environmental regulations. Performance information will be made available to the public as soon as it is developed and verified.

17. Will properties be put back to normal after the cleanup, and will any structures, such as 'seawalls', be left in place in the FWA after construction is completed?

There are no structures anticipated to be constructed as part of the FWA remedy. Trees will be knocked down and removed during cleanup operations and revegetation will occur after construction is completed. The FWA roadways which will be installed to conduct the Brook and FWA remedies will be removed. However, it is possible that these roads may be left in place for a few years after construction is completed in part to help ensure that the FWA and Brook remedies are operating and functioning properly.

In areas of excavation in the FWA, the landscape is planned to be returned to the current grade with clean soil backfill. As discussed at the 9/26/96 meeting, there are a few limited FWA areas planned to receive a 6" soil cover over areas of low level soil contamination.

In the Brook channel area, 1-2 inch stone (rip-rap) will be backfilled in most Brook sediment areas to be excavated.

18. Is the drinking water safe in this area? We get the water from Lake Erie. Does the Fields Brook Site affect drinking water in the vicinity of Rt. 193? Is EPA currently monitoring the Brook surface waters?

Water from Fields Brook is not considered a source of drinking water in the area. Contamination from the Site has not been found in the City of Ashtabula's drinking water. The City of Ashtabula receives its water from an area of Lake Erie not impacted by Fields Brook and the Ashtabula River. Also, public water systems of the size of Ashtabula's are required to monitor and test for various contaminants including most of the contaminants found in the sediments and soils in and around Fields Brook. This testing is done every three months. None of these monitoring samples have found any contamination associated with the Fields Brook Site. To help ensure protectiveness, the PRP group conducting work at the Site also tested the City's drinking water in 1992 at the intake point in Lake Erie and found no contamination in the water. Therefore, the City's drinking water was not found to be impacted by the Fields Brook Site, and is considered safe.

As discussed at the public meeting, several different and separate investigations conducted over the past several years have shown that surface waters in tributary areas of the Ashtabula River outside the Fields Brook watershed are not affected by the Fields Brook Site. The surface water and ground water areas around Route 193 are outside the Brook watershed and thus would not be expected to be impacted by contamination within the Brook.

Also, the Fields Brook Site investigations have found areas and sources of contamination in the Brook sediments and on the FWA and industrial properties surrounding the Brook, and these areas and sources of contamination are planned to be cleaned up over the next several years which will help ensure that the surface waters and FWA

soils in the Ashtabula area will not become contaminated in the future.

EPA's Superfund program is not currently monitoring the surface waters of the Brook or River. Surface water samples were collected from the Brook, river and harbor areas in the past. As a result of this sampling, it was determined that the City of Ashtabula's water supply in Lake Erie is not being contaminated. The surface water sampling conducted within the Ashtabula River which was conducted in 1991 and in earlier years did indicate a few exceedances of chemicals regulated as EPA drinking water standards; however, no exceedances significantly above the drinking water standards were indicated. Also, since at least 1972, all operating industries which discharged a significant amount of water to Fields Brook or the Ashtabula River were and are required to test their discharge water frequently (e.g., usually either monthly or weekly, sometimes daily or continuously) and treat their discharges if necessary to ensure that the water is clean. Thus, the Fields Brook and Ashtabula River surface waters are considered relatively clean of chemical substances. However, because the river water is not used directly for drinking water purposes, and because there may be bacteria and other organisms present in the surface water which might be unsafe to drink, it is not recommended that people drink the river water on a regular basis.

The proposed cleanup alternatives for the Brook sediments and FWA soils may require treatment of wastewater generated during cleanup operations. The treatment requirements of this wastewater will be based in part on Ohio EPA's surface water discharge permitting requirements, and discharges will be regulated to ensure that the waters have been treated sufficiently to assure protection of human health and the environment.

19. What type and number of samples have been taken in the Brook? How deep into the sediment has sampling occurred? What are the planned excavation depths in the Brook sediment? What areas of sediments will be excavated from the Brook?

The 2/95 "Sediment Quantification Design Investigation Report" (SQDI) which was prepared by the PRPs, summarizes the sediment data collected during the most recent and comprehensive sampling events which occurred between 1992 and 1995. This report is located within the information repositories. This report also identifies the proposed sediment excavation depths and locations. In general, the depth of excavation will be to the depth of potential scour which would occur based on analysis of a 100-year storm. In most areas of the Brook, this sediment depth is two feet. There are several locations where the excavation depth is deeper than two feet; in these cases, the maximum depth of excavation will be approximately 4 feet.

213 sediment samples were collected from 182 sampling locations within Fields Brook by the PRPs under EPA oversight between 1991 and 1995. Additional sediment samples were taken prior to 1991 by EPA. Sediment depth in Fields Brook is mostly two feet deep or less; however, sediment does exist in various locations up to approximately 4.5 feet deep. The samples collected for chemical analysis were taken from various sediment depths, from the surface down to approximately the three to four foot depth of sediment zone. These samples were each analyzed for approximately 130 different potential contaminants including PCBs, chlorinated compounds, various organics and metals. The results are available for public review in the information repositories in the Fields Brook Site sediment design documents.

There are several locations where there may be sediment left below the 2' depth after remediation. Based in part on the scour analyses, these sediments would not be likely to be released over time. The design for the Brook sediment remedy includes erosion-protection measures to prevent scour in any planned excavation and potentially scourable areas of the Brook and sideslopes. EPA's review of the data and studies indicates that by installing erosion-protective materials such as 'rip-rap' (small rocks) after sediment excavation, the potential for future erosion, given a 100-year storm event or less, into deeper sediment is unlikely; thus the remedy is protective.

20. Why would sediments migrate or scour to the inner harbor area if it hasn't moved in a hundred years?

If a large rainstorm occurs, there might be releases of contaminants which may cause a risk to humans or the environment. This is a natural phenomenon which occurs generally in every stream and river system, because streams and rivers are dynamic systems which cause erosion of underlying materials over time. Periodic large storm events cause the most erosion of Brook and river sediments.

EPA has been studying whether the contaminated sediments at depth in the River would be released during a '100-year' rainstorm; the study being used is a computer model which assesses the potential for scour of sediments in the River. Separate scour analyses were also conducted for the Brook sediments by the PRPs under EPA oversight, to assess whether and to what degree the Brook sediments would be released from a large rainstorm. These studies have been developed and based in part on hydraulic computer models which estimate the potential depths of sediment scour during a large rainstorm. The development of the models was based in part on evidence of scour from other stream and river systems. The models consider various different scour-related factors of a stream or river which vary based on the particular stream, such as water depth, amount of rainfall, volume and velocity of water,

sediment particle size/thickness/ durability, widths of stream, etc. These factors, once input into the model, affect how much sediment would be scoured and at what depths it would be scoured from the stream or river during a rainstorm.

The Brook scour studies (which have been placed in the information repositories) indicate that up to 4 feet of sediment in various locations would be scoured from the Brook from the worst rainstorm likely to happen every 100 years. The SQDI report referenced in the previous question also summarizes the results of the scour analyses. Regarding the river scour studies, a report is expected to be available to the public and released to the information repositories in December 1996 or in early 1997. Figures will be provided which indicate potential sediment scour areas with concentrations above 1 ppm, 5 ppm, 10 ppm, 25 ppm, and 50 ppm total PCB's. A few of the preliminary findings of the Ashtabula River scour modeling efforts are that particular areas of the river where water velocities are faster would be more likely to scour (e.g., the straight channels of the river, vs. the pooling areas such as the turning basins), and it appears that about three feet of sediment might scour in these scourable river sediment areas during a 100 year storm.

Also, several areas of the river are shallow enough that the boats using the river occasionally scour surface sediment, especially when boats turn in the river.

21. Why doesn't EPA permanently reroute the Brook and cover up the contaminated sediments, instead of temporarily rerouting the Brook and then moving the Brook back to its original location?

Permanent rerouting of the Brook was considered in 1986 and was discussed within the Responsiveness Summary to Comments received on the Proposed Plan for the Fields Brook sediment "Record of Decision" document issued by EPA. The diversion alternative was not considered effective and was considered unacceptable for both long-term reliability and environmental reasons.

Some of the concerns regarding a permanent rerouting include the following:

Streams naturally meander and also frequently try to return to areas where they had previously flowed.

There might be a higher degree of operation and maintenance required for a permanent covering of stream sediments next to a flowing rerouted Brook, to ensure that the cover area remains protective.

The existing habitat and ecology would be significantly disturbed by the rerouting action, and this disturbance would take years to recover.

The FWA soils are contaminated in various areas and rerouting the Brook to areas already contaminated would not be appropriate.

The Brook has a narrow channel in various locations and there may not be sufficient space for a rerouted Brook.

22. What are the risks if people swim or fish in the River? Any other risks regarding the River?

Regarding swimming in the river, there is no formally designated bathing area in the river (i.e., no beach). In general, no one swims in the river, due in part to both pollution concerns and little public access to the resource. However, a boater or angler may occasionally "fall" into the river, or retrieve items, or in some other fashion come into contact with river water. The surface waters of the Ashtabula River were tested for chemical contamination in 1991 and in earlier years and this testing indicated only a few exceedences of EPA drinking water standards. Also, since at least 1972, all operating industries which discharged a significant amount of water to Fields Brook or the Ashtabula River were required to test the water every three or six months, and treat their discharges if necessary to ensure that the water is clean. Thus, the Ashtabula River surface waters do not generally have significant levels of chemicals present which would present a significant risk to someone who might occasionally swallow the river water. However, the Ashtabula County Health Department conducted a limited fecal coliform study at 6 locations in the river in August 1994, and in one area (where Strong Brook empties into the Ashtabula River) fecal coliform bacterial levels exceeded the public bathing, primary contact, and secondary contact recreation standards. Because there may be bacteria and other organisms present in the surface water which might be unsafe to drink or swim in, it is not recommended that people swim in or drink the river water on a regular basis.

There is currently a "fish advisory" issued by the State of Ohio Department of Health for the Ashtabula River. This advisory recommends that people should not eat fish caught in the Ashtabula River. The concentrations of PCBs in fish in the Ashtabula River have dropped significantly within the last 10 years. If this trend continues, the future concentrations of PCBs in fish may drop below levels requiring a fish advisory.

There is a significant amount of contamination at depth within Ashtabula River sediments; most of this contamination was probably deposited in the River before the mid 1980's, and is covered generally by several feet of relatively cleaner surface sediments. The surface sediments of the River generally do not have high levels of contamination, because cleaner sediments from upstream have been washing in over the past decade. The PRPs who conducted the Ashtabula River Investigation (ARI) effort under an Administrative Order on Consent with EPA

produced an Ashtabula River Investigation Report, which was finalized by EPA on 9/23/94 and was released to the public and is located at the information repositories. This report contains tables and figures indicating locations of contamination within the River sediment.

If a large rainstorm occurs, or if uncontrolled future dredgings of the river occur, there might be releases of contaminants which may cause a risk to humans or the environment. EPA has been studying whether the contaminated sediments at depth would be released during a 'worst-case' rainstorm. The study being used is a computer model which assesses the potential for scour of contaminated sediments in the River. One of the scenarios studied where sediments would be scoured and where the scoured sediments would likely settle during and after the worst rainstorm which would likely happen every 100 years. A report of these studies is expected to be available to the public and released to the information repositories in December 1996 or in early 1997. Figures will be provided which indicate potential sediment scour areas with concentrations above 1 ppm, 5 ppm, 10 ppm, 25 ppm, and 50 ppm total PCB's. A few of the preliminary findings of scour modeling efforts are that particular areas of the river where water velocities are faster would be more likely to scour (e.g., the straight channels of the river, vs. the pooling areas such as the turning basins), and it appears that about three feet of sediment might scour in these scourable areas during a 100 year storm.

23. Will there be a Superfund cleanup in the River? What areas of sediments will be excavated from the River? Are the PRP's responsible for what will be scoured in the river? What is the Ashtabula River Partnership, and what is its cleanup timeline? Is the river going to be dredged? If so, will it happen in 1998? What areas of sediments will be excavated from the River? Why is the Ashtabula River not part of the Fields Brook Superfund Site?

At this time, the Ashtabula River is not considered part of the Fields Brook Superfund Site. As discussed below, EPA plans to defer making a decision regarding Superfund status of the Ashtabula River at least until after: a) information from the river investigation and scour modeling is provided and reviewed; b) the status of the Ashtabula River Partnership's efforts to secure funding for dredging has been reviewed soon after release of the scour report; c) a Risk Assessment is conducted, if necessary; and d) a Feasibility Study is conducted, if necessary.

As discussed at the 5/27/93 and 9/27/96 public meetings, contamination found in Fields Brook sediment has been shown to have migrated into the river sediment and it may be necessary and appropriate to remediate those contaminants as part of the Fields Brook site Superfund

remediation activities. However, a Public/Private Partnership known as the Ashtabula River Partnership (ARP) involving EPA, U.S. Army Corps of Engineers, the State, City, Local groups, local industries, local businesses, the County, and public officials was formally initiated in 1/94. The overall ARP goals are to restore beneficial uses by removing the River's contaminated sediments. The Superfund program is monitoring progress of the ARP, and if the ARP develops firm plans to dredge and remove the contaminated sediments, then EPA may suspend or stop its Superfund-related studies associated with the Ashtabula River after release of the scour report.

The current ARP schedule to begin dredging river sediments is around the year 2000. Phase 1, preliminary design, for this potential ARP dredging project has been fully funded and costs approximately \$2 million. Phase 2, detailed design, will cost another approximately \$2 million and this effort has not yet started. The Phase 2 efforts have been 50% funded to date with good prospects that the additional funding needed will be secured in 1997. The cost of Phase 3, the dredging action, has not yet been determined, but significant progress has also occurred to date to secure these funds. ARP is planning to release a draft Environmental Impact Statement detailing the selected project for the River and Harbor next fall (October 1997) for public review.

As discussed above in the answer to question #22, once the river scour modeling report is finished, EPA plans to release a report of these studies to the information repositories in December 1996 or in early 1997. If the Partnership has not secured funding for dredging the river soon after EPA releases the scour report, EPA may then proceed to conduct a Risk Assessment under Superfund authority which would consider possible exposures to contamination in the River and also assess potential effects to nearby residents and to the environment of any potential releases of contaminated sediments from the River. If the River Risk Assessment study is conducted and the report is prepared, it will be released to the public for review.

If this Risk Assessment is conducted and an unacceptable risk is indicated, then EPA may then conduct a Feasibility Study to identify potential remedies to address the potential unacceptable risks posed by the contaminated river sediments. At this time, we do not know whether there is a risk associated from the potential scour and release of sediments within the river and whether any Superfund remedies would be needed in the river.

Additional Information

Anyone interested in learning more about the investigation, the Proposed Plan for controlling contamination at the Fields Brook FWA Site, or the Superfund process is encouraged to review the Information Repositories maintained for the Fields Brook Site. They contain copies of the FS, the Risk Assessment, the Proposed Plan, and other materials related to the Site. The Information Repositories are located at the following locations:

- 1) Ashtabula County District Library
335 West 44th Street
Ashtabula, OH
- 2) U.S. Environmental Protection Agency
Waste Management Division
Records Center, 7th Floor
77 West Jackson Blvd.
Chicago, IL

For further information on the Fields Brook Site, please contact:

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